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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/832,098 | 04/11/2001 | Cathy Liu | LIUC3002/EM/6680 | 8675 |

43831 7590 04/19/2007

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| EXAMINER | |
|---|---|
| GIBBS, HEATHER D | |
| **ART UNIT** | **PAPER NUMBER** |
| 2625 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 04/19/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/832,098 | LIU, CATHY | |
| | Examiner | Art Unit | |
| | Heather D. Gibbs | 2625 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed on 03/26/07 has been entered and made of record.

### *Response to Arguments*

2. Applicant's arguments filed have been fully considered but they are not persuasive. For claim 1,23-25, Applicant argues the Examiner fails to address what meaning has been given to the term "preset". The Examiner utilizes the finding of the Background where applicant teaches the calibration parameter is calculated and set during the prescanning process. See Pages 2 Lines 11-16. Examiner has also added the reference Xu et al to further point out wherein the preset calibration is obvious.

For claims 2-7, 17,22,24-25, 34-35, Applicant argues Wieloch does not teach nor suggest, "storing a preset calibration parameter via a calibration for the captured image." Upon further review, the Examiner finds the combination of Applicant's admitted prior art and Wieloch to be pertinent in that it would modify the driving means that controls the image-capturing device.

For claims 8,26-28,36-38, Applicant argues Edgar does not teach or suggest "performing one or more subsequent scanning of one or more subsequent scanning objects without performing a subsequent pre-scanning calibration." Upon further review, the Examiner finds in Col 4 Lines 31- Col 5 Lines 55 where Edgar scans the objects subsequently without performing a pre-scanning calibration.

Regarding claims 9-14, 27-28,37-38, I In response to applicant's argument that Wieloch '023 is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Wieloch teaches of a calibration system, which can easily be modified, to become incorporated in any image scanning circuitry.

Considering claims 15-16, 29-32,39-42, Applicant argues Sptiz does not teach, "determining if a calibration parameter is stored and calculating a calibration parameter if no calibration parameter is stored." In Col 5 Lines 45-53, Spitz teaches wherein the calibration parameter is retrieved as needed and hence the operation can be performed if no calibration parameter is stored.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Xu et al (US 6,763,141).

Applicant makes admission in the background section that the claims are already known. Regarding claim 1,Applicant admits an image scanning method for a

scanner, comprising using an image capturing element to perform image capturing on a scanning object 133; using a preset calibration parameter to perform compensation and calibration for the captured image 132; and completing image scanning for the object and repeating the using an image capturing element for a subsequent scanning object. See Ref 135. (Figs 1A and 1B)

Xu teaches a preset calibration relationship between a captured image and an original object wherein compensation is performed (Col 3 Line 66- Col 4 Lime45; Fig 2).

It would have been obvious to at the time the invention was made to use applicant's admitted prior art and Xu et al to read on the limitations above as the preset calibration parameter can be utilized when the image scanning element scans the calibration chart before a scanning operation, as both involve scanned images.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's invention in view of Edgar et al (US 5,406,070).

For claim 8, Applicant teaches An image scanning method for a scanner, comprising performing a pre-scanning calibration to obtain a calibration parameter (132); using an image capturing element to perform image capturing on a scanning object (133); d) using the calibration parameter obtained at the performing of the pre-scanning calibration to perform compensation and calibration for the captured image (134); and e) completing image scanning for the object (135). (Background. Figs 1A and 1B).

Applicant does not specifically teach and f) performing one or more subsequent scanning of one or more subsequent scanning objects without performing a subsequent pre-scanning calibration.

Edgar discloses performing one or more subsequent scanning of one or more subsequent scanning objects without performing a subsequent pre-scanning calibration (Fig 4).

Applicant's admitted prior art and Edgar are combinable because they are from the same field of endeavor, scanning apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to of combine Edgar with applicant's invention.

The suggestion for doing so would have been to assist in achieving desired image quality.

Therefore, it would have been obvious to one of ordinary skill to combine Edgar with Applicant's invention.

6. Claims 2-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Wieloch (US 5,764,023).

Regarding claim 2,Applicant discloses holding the scanning object 11 via a holding board 10; capturing the image of the scanning object via an optical chassis 12 comprising an image-capturing element 24.

Applicant does not disclose expressly storing a preset calibration parameter via a control module comprising a read only memory (ROM) and using the stored calibration parameter to perform compensation and calibration for the captured image.

Wieloch discloses a control module having a read only memory (ROM) for storing a preset calibration parameter and using the stored calibration parameter to perform compensation and calibration for the captured image (Col 7 Lines 52-66).

Admitted prior art & Wieloch are combinable because they are from applications, which require control options.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the admitted prior art with Wieloch.

The suggestion/motivation for doing so would have been to provide compensation and calibration for the captured image.

Therefore, it would have been obvious to combine the admitted prior art with Wieloch to obtain the invention as specified in claims 2,9.

Regarding claim 3, the admitted prior art disclose holding the scanning object comprises holding the scanning object via the holding board comprising glass or acrylic material (holding a scanning object which linear lamp tube projects light on and transmit the image to the lens).

Regarding claim 4, wherein the capturing the image of the scanning object comprises capturing the image of the scanning object via the image-capturing element of the optical chassis comprising a charge couple device. It is inherent that the image-capturing element of the optical chassis be a charge-coupled device (CCD).

Considering claim 5, Applicant admits projecting on the scanning object via a linear light source to generate a reflecting image; reflecting the reflected image via one

or more reflecting mirrors; and refracting the reflected image through a lens to form an image on the image capturing element (Background Section).

Considering claim 6, Applicant admits moving the optical chassis along the holding board to scan the object via a driver (Background Section).

Regarding claim 7, Wieloch teaches wherein the storing the preset calibration comprises storing the preset calibration parameter via the control module comprising a selected system file (Col 8 Lines 5-25).

7. Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Edgar' 070 and further in view of Wieloch '023.

Applicant's admitted prior art and Edgar teach of the scanning method as discussed above.

Applicant's admitted prior art and Edgar do not teach storing a preset calibration parameter via a control module comprising a read only memory (ROM) and using the stored calibration parameter to perform compensation and calibration for the captured image.

Wieloch discloses a control module having a read only memory (ROM) for storing a preset calibration parameter and using the stored calibration parameter to perform compensation and calibration for the captured image (Col 7 Lines 52-66).

Admitted prior art, Edgar & Wieloch are combinable because they are from applications, which require control options.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the admitted prior art and Edgar with Wieloch.

The suggestion/motivation for doing so would have been to provide compensation and calibration for the captured image.

Therefore, it would have been obvious to combine the admitted prior art and Edgar with Wieloch to obtain the invention as specified in claims 9.

For claim 10, the admitted prior art disclose holding the scanning object comprises holding the scanning object via the holding board comprising glass or acrylic material (holding a scanning object which linear lamp tube projects light on and transmit the image to the lens).

Regarding claim 11, wherein the capturing the image of the scanning object comprises capturing the image of the scanning object via the image-capturing element of the optical chassis comprising a charge couple device. It is inherent that the image-capturing element of the optical chassis be a charge-coupled device (CCD).

Considering f claim 12, Applicant admits projecting on the scanning object via a linear light source to generate a reflecting image; reflecting the reflected image via one or more reflecting mirrors; and refracting the reflected image through a lens to form an image on the image capturing element (Background Section).

Considering claim 13, Applicant admits moving the optical chassis along the holding board to scan the object via a driver (Background Section).

Regarding f claim 14, Wieloch teaches wherein the storing the preset calibration comprises storing the preset calibration parameter via the control module comprising a selected system file (Col 8 Lines 5-25).

8. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Spitz (US 5,939,697).

Applicant's admitted prior art discloses c) using an image capturing element to perform image capturing on a scanning object; d) using the calibration parameter obtained at the judging to perform compensation and calibration for the captured image; and e) completing image scanning for the object and repeating the step c through d without further performing the judging step.

Applicant's admitted prior art does not disclose expressly a) judging if a calibration parameter is stored and calculating a calibration parameter if no calibration parameter is stored; wherein the following steps are performed when the outcome of the step a) is negative: al) performing pre-scanning and calculating calibration parameter; and a2) storing the calibration parameter in the control module.

Spitz discloses expressly a) judging if a control module having a calibration parameter is required; b) providing a scanning object if the outcome of the step a) is positive; wherein the following steps are performed when the outcome of the step a) is negative: al) performing pre-scanning and calculating calibration parameter; and a2) storing the calibration parameter in the control module (Col 8 Lines 19-28).

Applicant's admitted prior art & Spitz are combinable because they are from methods of calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the admitted prior with Spitz. The suggestion/motivation for doing so would have been as Spitz teaches the calibration parameter group may be

retrieved as need (i.e. when the scanning object is positive). When the parameter group is not needed the outcome would be considered negative and hence pre-scanning would be performed and the calibration parameter would be stored in the computing and evaluation system 31.

Therefore, it would have been obvious to combine Spitz with the admitted prior to obtain the invention as specified in claims 15-16.

9. Claim 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art and Spitz '697 in view of Wieloch '023.

Applicant's admitted prior art discloses: for holding the scanning object 11 via a holding board 10; capturing the image of the scanning object 11.

Applicant does not disclose expressly storing the calibration parameter via a control module, and using the stored calibration parameter to perform compensation for the captured image.

Wieloch discloses a control module having a read only memory (ROM) for storing a preset calibration parameter and using the stored calibration parameter to perform compensation and calibration for the captured image (Col 7 Lines 52-66).

Applicants admitted prior art; Spitz & Wieloch are combinable because they are from calibration systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the admitted prior art, Spitz, and Wieloch.

The suggestion/motivation for doing so would have been to provide compensation and calibrations for the described system. Therefore, it would have been

obvious to combine the admitted prior art and Spitz with Wieloch to obtain the invention as specified in claim 17.

Considering claim 18, the admitted prior art disclose holding the scanning object comprises holding the scanning object via the holding board comprising glass or acrylic (holding a scanning object which linear lamp tube projects light on and transmit the image to the lens) [Background Section].

Regarding claim 19, wherein the capturing the image of scanning object comprises capturing the image of the scanning object via the image-capturing element of the optical chassis. It would be inherent that the image-capturing element of the optical chassis be a charge-coupled device (CCD).

Regarding claim 20, the admitted prior art disclose projecting on the scanning object via a linear light source to generate a reflection image; reflecting the reflected image via one or more reflecting mirrors; refracting the reflected image through a lens to form an image on the image capturing element (Background Section).

Considering claim 21, admitted prior art disclose moving the optical chassis along the holding board to scan the object (Background Section).

Regarding claim 22, Wieloch teaches wherein the storing the calibration parameter comprises storing the calibration parameter via the control module comprising a selected system file (Col 8 Lines 5-25).

Claims 23-42 are newly added and are representative of the claims 1-22, as noted by Assignee.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather D. Gibbs whose telephone number is 571-272-7404. The examiner can normally be reached on M-Thu 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung S. Moe can be reached on 571-272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather D Gibbs
Examiner
Art Unit 2625

hdg

SUPERVISORY PATENT EXAMINER
AUNG S. MOE
4/16/07